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DIAGNOSTIC SIGNIFICANCE OF THE TG- (TUMOR GROWTH) TEST IN OPERATIVE GYNECOLOGY

[ДИАГНОСТИЧЕСКОЕ ЗНАЧЕНИЕ РО-ТЕСТА В ОПЕРАТИВНОЙ ГИНЕКОЛОГИИ]

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DIAGNOSTIC SIGNIFICANCE OF THE TG- (TUMOR GROWTH) TEST IN OPERATIVE GYNECOLOGY

Female genital tumors account for a significant share of gynecologic diseases total.

Surgical intervention, with differs significantly for benign and malignant tumors is known to be the principal method of their treatment. Early detection of tumors jointly with shortening the periods from initiation of these diseases to their detection governs the efficiency of treatment. Further, adequate planning of treatment procedures is only possible based on complete and unbiased information about the statuses of female patients and their disorders.

Our medical research specialists have developed a new multipurpose diagnostic test for tumor growth (TG-test). The modified test for patient's erythrocyte hemoglutination is based on application of an antiidiopathic and antiembryonic serum [2]. The oncology research data available give evidence of high sensitivity and selectivity of this method.

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[1] Numbers in the margins indicate pagination in the foreign text.

Our research project was targeted at assessment of diagnostic value of the TG-test in female patients suffering from variable gynecologic pathologies.

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We have examined 53 female patients aged 25 to 58. Their case detection pattern was as follows (numbers of cases): malignant genital tumors - 6; hysteromyomas - 19; benign ovarian tumors - 6; tumor-like ovarian neoplasms - 18; other disorders - 4.

To complete the TG-tests, 3 samples of blood were drawn from each patient before their surgical procedures. Next, venous blood (1 ml) was added to 200 ml of sodium citrate (5 % solution) in phosphate buffer solution (samples of 100 ml each). Further, reference serum (20 ml each) was added to the blood samples 1 and 2; test serum (antiidiopathic and antiembryonic serum, 20 ml) was added to the blood of Sample 3. The resulting blood mixtures were placed into capillary tubes for ESR (erythrocyte sedimentation rate) determinations and incubated for 1 hr. Next, the result was calculated by a special formula. All values more than 1.5 pointed to growth of tumors.

All the patients were operated, and their removed macroscopic specimens were examined with histology methods. Examination data were compared with the TG-test findings.

All the patients having malignant tumors (ovarian carcinoma - 3; carcinoma of uterus - 2 cases, and cervical carcinoma - 1 case) showed the TG-test values exceeding 1.5 (from 1.68 to 5.6). Sensitivity of the test for malignant tumors was equal to 100 %.

For patients having hysteromyomas the TG-test values ranged from 0.18 to 6.08. The TG-test values were higher than 1.5 (1.55 - 6.08) for 9 female patients of 19 total. The patients with high TG-test values had secondary posthemorragic anemia, disturbed feeding of myoma nodes, or acute appendicitis.

For the patients having benign ovarian tumors (serous cystoadenoma - 5 cases; theca cell tumor - 1 case) the TG-test values ranged from 0.27 to 3.20. The TG-test values of 1.92 and 3.2, respectively, were found in 2 female patients of 6.

For patients having tumor-like ovarian neoplasms (follicular cyst - 4; corpus luteum cyst - 2; epithelium-free cyst - 5; parovarian cyst - 1; and endometrial cyst - 6 cases) the TG-test values were more than 1.8 in 8 cases, and varied from 1.8 to 6.48. Minimum values ranged from 0.07 to

0.08. 5 of 8 female patients characteristic of higher TG-test values had endometrial ovarian cysts.

Further, for 4 female patients (chronic endometritis - 1; prolapse of uterus - 1; vaginal wall endometriosis - 1 case) the TG-test value of 4.32 was found only for the patient with vaginal wall endometriosis. In all other cases the values were much lower (0.50 - 0.90).

Based on the experimental analysis of functional involvement of embryonic and stage-specific surface antigens (characteristic of tumor cells) into carcinogenesis it has become possible to justify a new approach to the development of tumors in human body and also to work up the TG-test to detect the antigenic markers of all malignant tumors irrespective of their histogeny and stages of the tumor process [1].

Our experimental research has validated high sensitivity (at 100 %) of the method for malignant tumors of female genitals. It is worthy of note, however, that the TG-test values may also be high also in case of benign tumors. Specifically, for hysteromyoma patients, that having benign ovarian tumors or ovarian cysts the sensitivity of this method was equal to 47.37 %; 33.33 %; and 44.44 %, respectively.

It is likely that the TG-test data may be influenced by active proliferation and regeneration of tissues at inflammations, long-term anemia and also by some other functionally active processes. In particular, the latter statement is supported by our test data for hysteromyoma. The TG-test values are high for the patients having secondary posthemorragic anemia in decompensated forms or degenerative changes in myomatosic nodes.

As to the TG-test, among all of the benign gynecology diseases a special attention should be paid to genital endometriosis. To illustrate, for tumor-like ovarian neoplasms the high TG-test values were found in most cases for the endometrial cyst patients. High TG-test values were characteristic also of vaginal endometrioses. Such high values, however, were found not in all cases of endometriosis, probably due to activity of the endometriosis foci themselves.

To summarize, the multipurpose diagnostic test for tumor growth (TG-test) is a highly sensitive method for differential diagnostics of benign and malignant tumors of female genitals. In some cases, however, the TG-test values may also high at benign diseases. The TG-test values may serve as indicators of the development degree for proliferation processes at hysteromyoma in the human body,

and also as those of the endometriosis activity. In such cased the TG-tests, completed repeatedly, may provide us with valuable clinical data.

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